

**REMARKS**

The Official Action mailed March 21, 2007, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 20, 1999; December 13, 2000; December 22, 2000; September 7, 2001; May 10, 2002; October 3, 2002; March 3, 2003; April 2, 2003; October 2, 2003; December 16, 2003; November 1, 2004; and October 17, 2005.

Claims 1-42 are pending in the present application, of which claims 1, 8, 13, 17, 25, 30 and 31 are independent. Each of the independent claims has been amended to clarify and better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 1, 2, 4-8, 10, 12-14, 16-18, 20-27, 29, 31-33, 35 and 36 as anticipated by U.S. Patent No. 4,851,363 to Troxell. The Applicant respectfully submits that an anticipation rejection cannot be maintained against the independent claims of the present application.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The independent claims recite that an insulating film includes halogen and carbon and a concentration of the halogen in the insulating film is  $5 \times 10^{20} \text{ cm}^{-3}$  or less and a concentration of the carbon in the insulating film is  $5 \times 10^{19} \text{ cm}^{-3}$  or less. For the reasons provided below, the Applicant respectfully submits that Troxell does not teach the above-referenced features of the present invention, either explicitly or inherently.

The Official Action concedes that the silicon oxide film of Troxell “does not have halogen and carbon” (page 2, Paper No. 20070317). The Applicant respectfully submits that Troxell does not teach that an insulating film includes halogen and carbon, either explicitly or inherently.

The Official Action asserts that halogen and carbon in the silicon oxide insulating film “are about zero,” and, on the basis of this assertion, the Official Action further asserts that “it is clear that the insulating film (24, 26, and 28) have halogen at a concentration less than  $5 \times 10^{20} \text{ cm}^{-3}$  and carbon at a concentration less than  $5 \times 10^{19} \text{ cm}^{-3}$ ” (Id.). The Applicant respectfully disagrees and traverses the assertions in the Official Action. Troxell simply does not teach that carbon and halogen could or should be included in the insulating film (24, 26, and 28), much less that the concentration of such elements “are about zero” as asserted in the Official Action. In fact, the Official Action does not provide any specific references from the prior art of record in support of these statements. The Applicant respectfully submits that the Official Action has not shown that the insulating film of Troxell necessarily includes halogen and carbon, either explicitly or inherently.

The Official Action newly argues that “[t]he concentration of halogen and carbon in Troxell is clearly less than  $5 \times 10^{20} \text{ cm}^{-3}$  and less than  $5 \times 10^{19} \text{ cm}^{-3}$ , respectively” and states that the claims are given their broadest reasonable interpretation (page 3, Id.). However, the broadest reasonable interpretation of the present claims still requires a recognition in the prior art that a concentration of halogen and carbon exists in the insulating film. Troxell is completely silent as to halogen or carbon, much less halogen or carbon in an insulating film. The absence of any teaching related to halogen or carbon in an insulating film simply is not a teaching that there is little or no halogen or carbon in the insulating film. Troxell cannot anticipate a feature that it does not even contemplate. Therefore, the Official Action has not shown that the insulating film of Troxell necessarily includes halogen and carbon, either explicitly or inherently.

Since Troxell does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

The Official Action rejects claims 3, 9, 11, 15, 19, 28, 30, 34 and 38-42 as obvious based on the combination of Troxell, U.S. Patent No. 4,851,363 in view of Tamai et al., U.S. Patent 5,506,064 and U.S. Patent No. 5,629,245 to Inushima. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Please incorporate the arguments above with respect to the deficiencies in Troxell. Tamai and Inushima do not cure the deficiencies in Troxell. The Official Action relies on Tamai and Inushima to allegedly teach the features of the dependent claims.

Specifically, the Official Action relies on Tamai to allegedly teach that carbon can be detected by second ion mass spectroscopy (page 3, Paper No. 20070317) and on Inushima to allegedly teach plasma CVD using an organic silane (Id.). However, Troxell, Tamai and Inushima, either alone or in combination, do not teach or suggest that the insulating film of Troxell could or should include halogen and carbon.

Since Troxell, Tamai and Inushima do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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